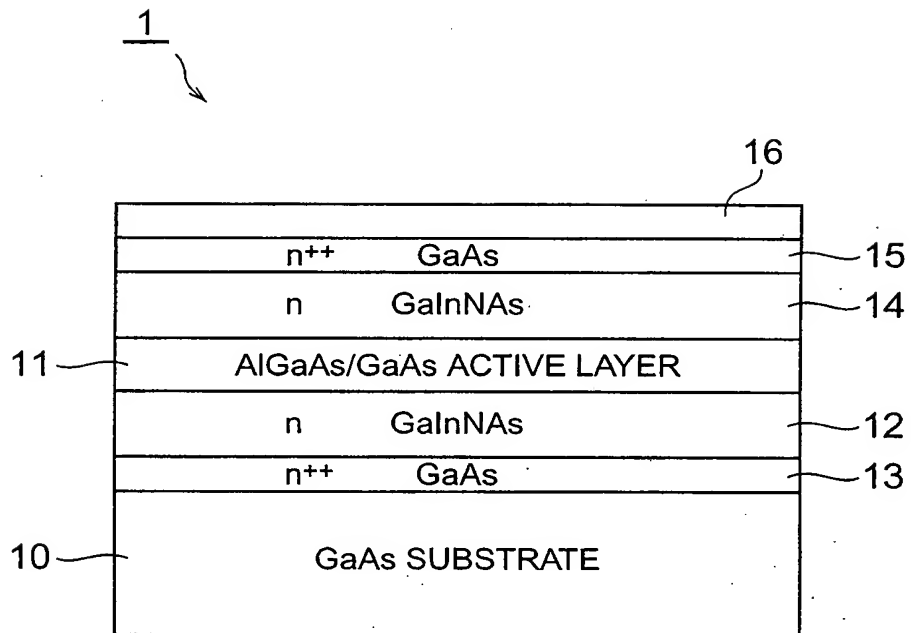
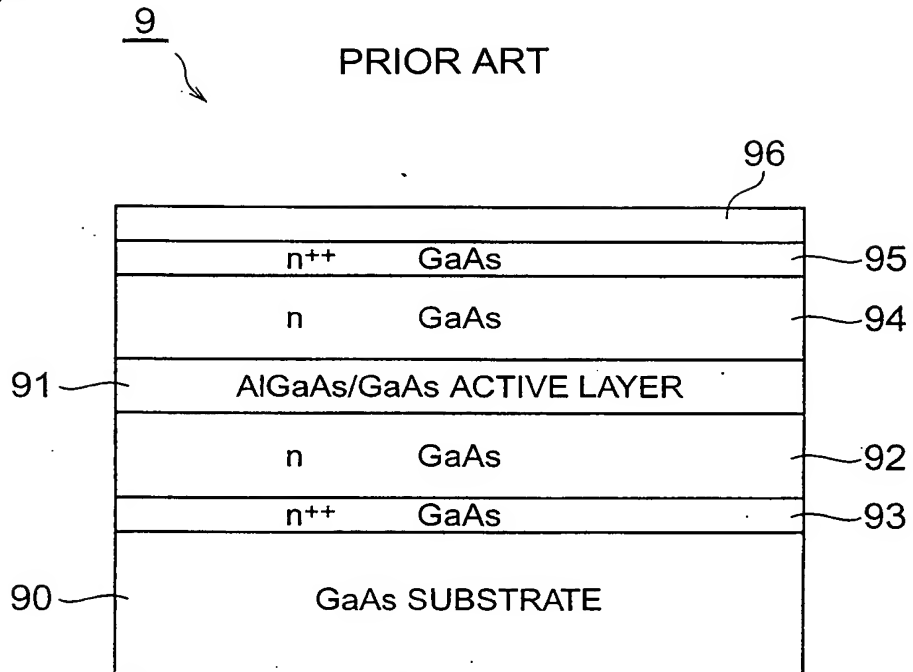
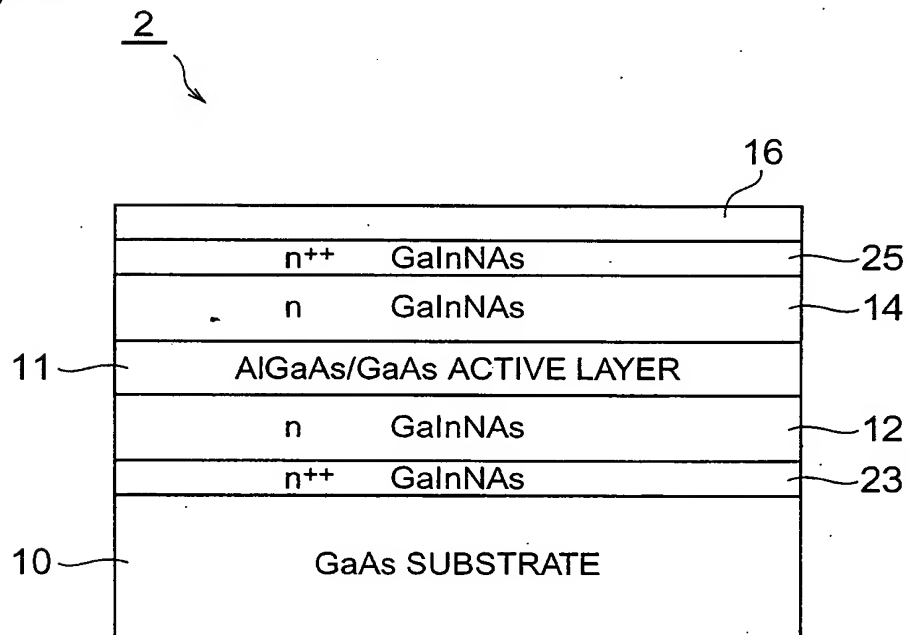


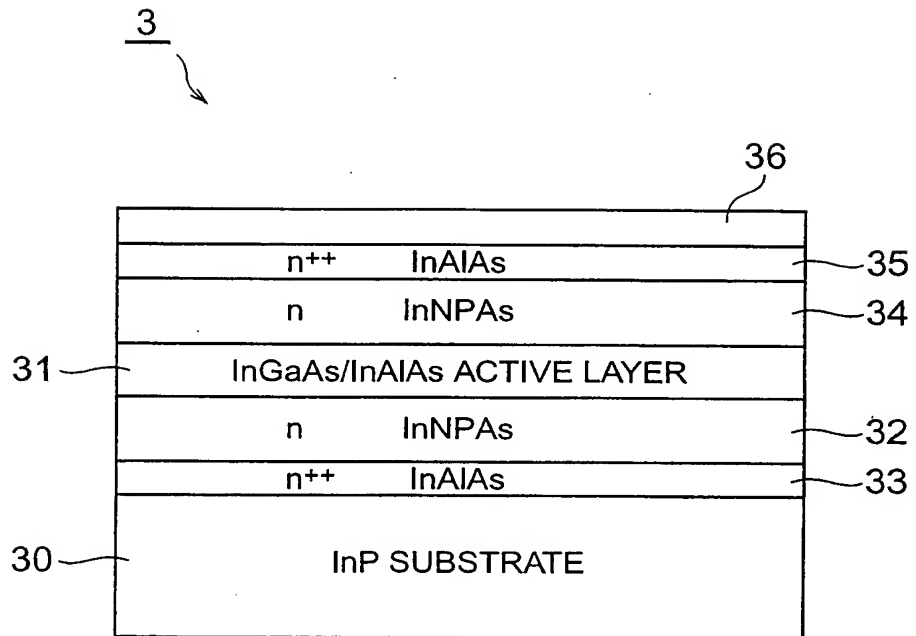
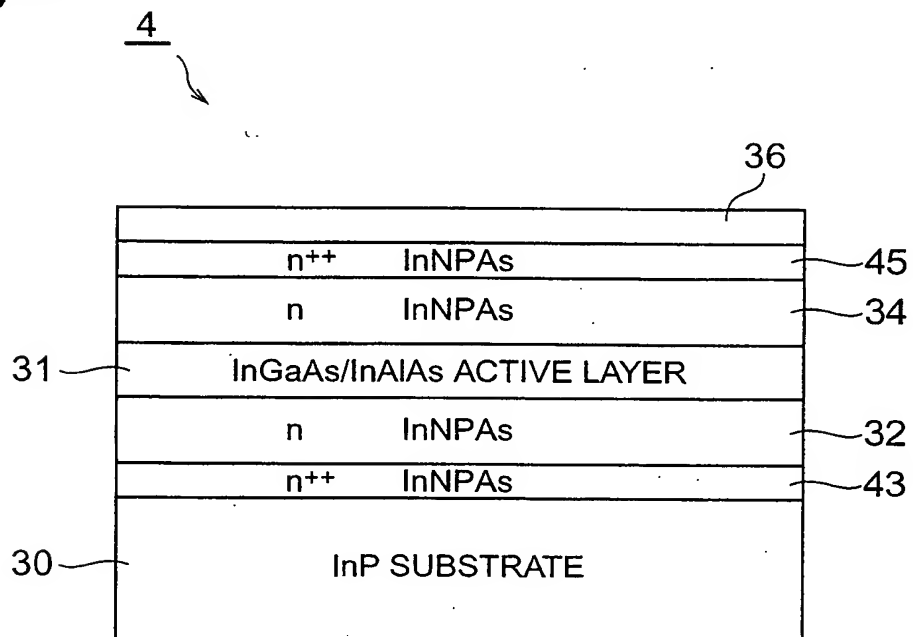


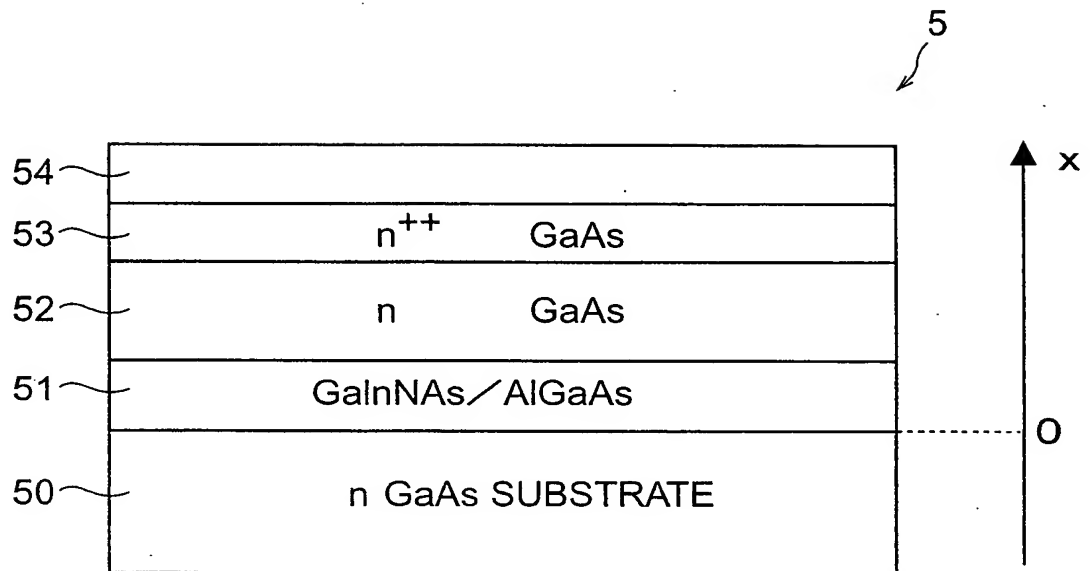
**Fig.1**

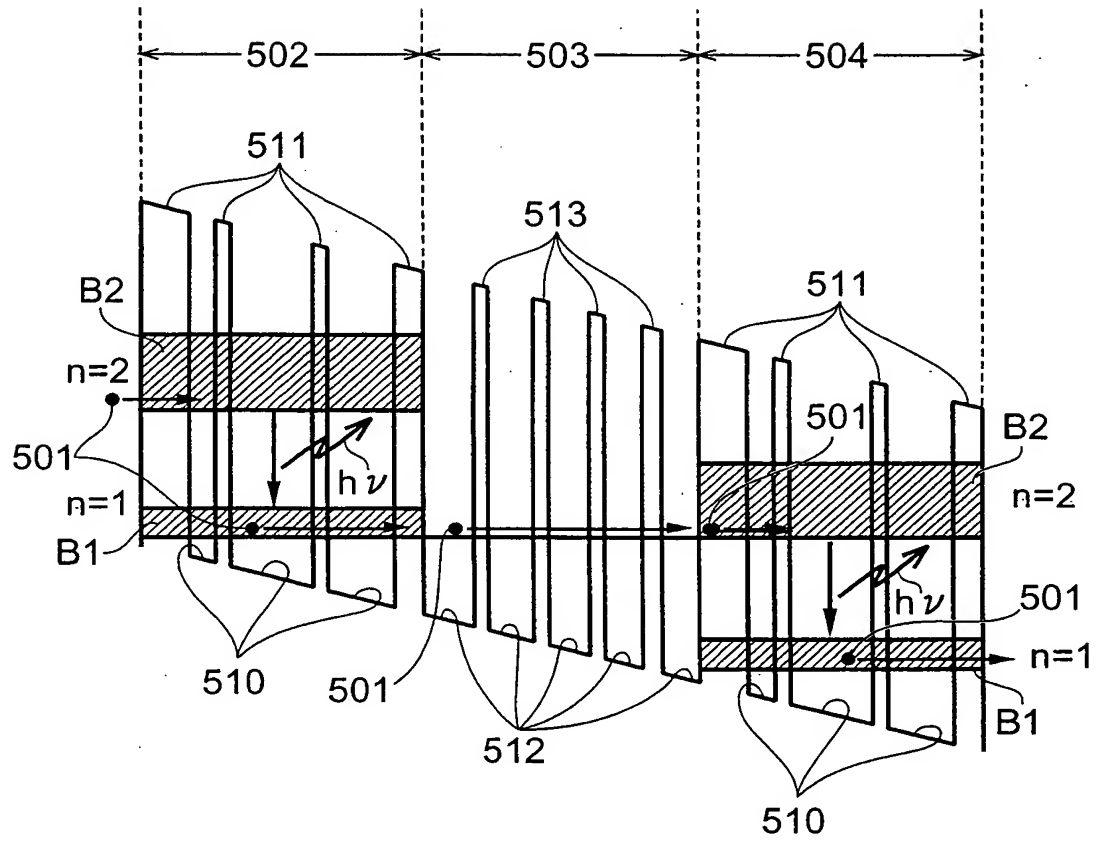




**Fig.3****Fig.4**

**Fig.5****Fig.6**

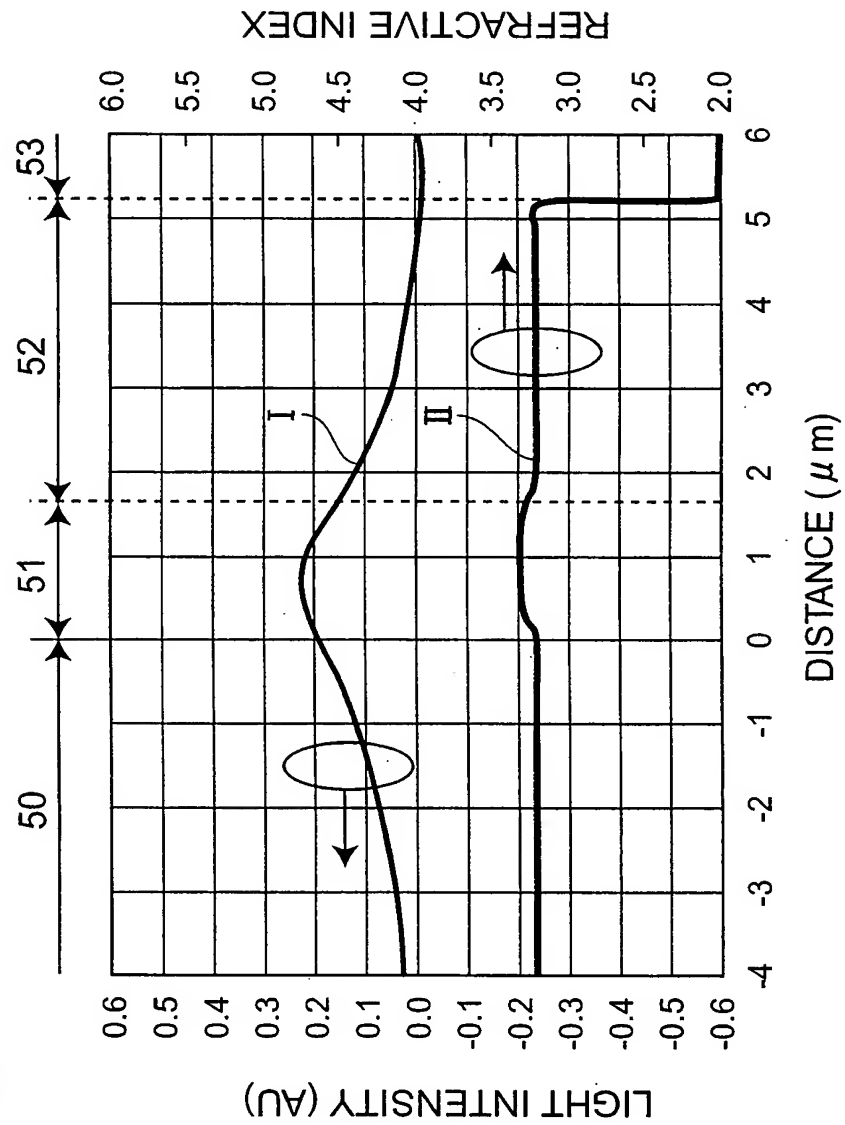
**Fig.7**

**Fig.8**

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**Fig.9**

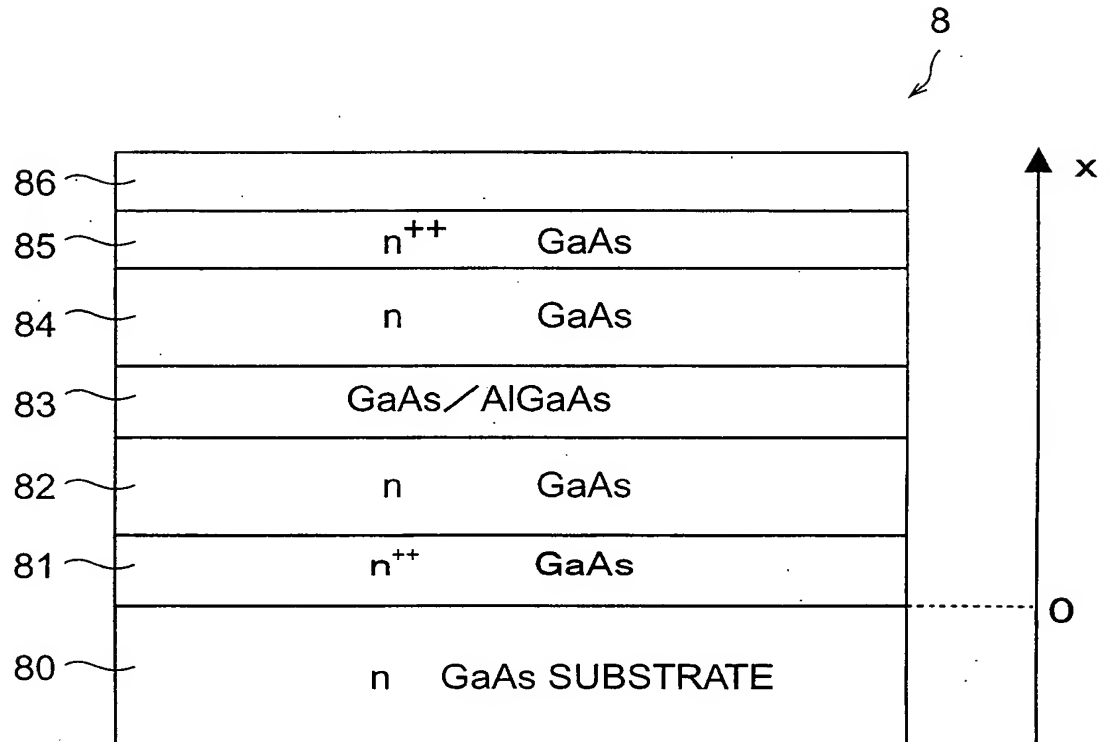
	LAYER COMPOSITION	THICKNESS(nm)	CARRIER DENSITY ( $\text{cm}^{-3}$ )
INJECTION LAYERS	GaInNAs	2.1	UNDOPE
	AlGaAs	2.5	UNDOPE
	GaInNAs	2.3	$1.6 \times 10^{17}$
	AlGaAs	2.5	$1.6 \times 10^{17}$
	GaInNAs	2.3	$1.6 \times 10^{17}$
	AlGaAs	2.3	$1.6 \times 10^{17}$
	GaInNAs	2.8	UNDOPE
	AlGaAs	2.0	UNDOPE
	GaInNAs	3.2	UNDOPE
QUANTUM WELL LIGHT EMITTING LAYERS	AlGaAs	3.4	UNDOPE
	GaInNAs	4.0	UNDOPE
	AlGaAs	1.7	UNDOPE
	GaInNAs	4.9	UNDOPE
	AlGaAs	2.0	UNDOPE
	GaInNAs	1.5	UNDOPE
	AlGaAs	5.8	UNDOPE

**Fig.10**



**Fig.11**

PRIOR ART

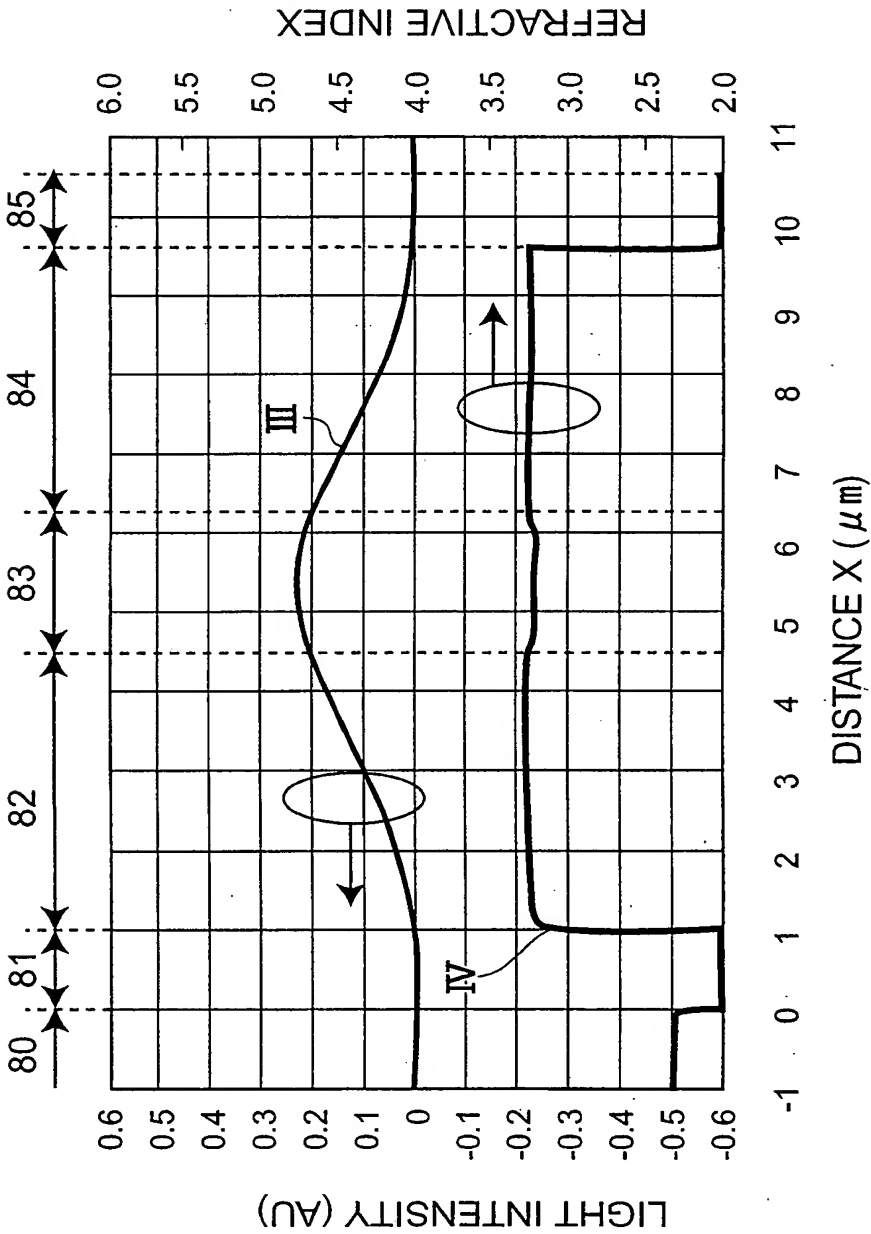


**Fig.12** PRIOR ART

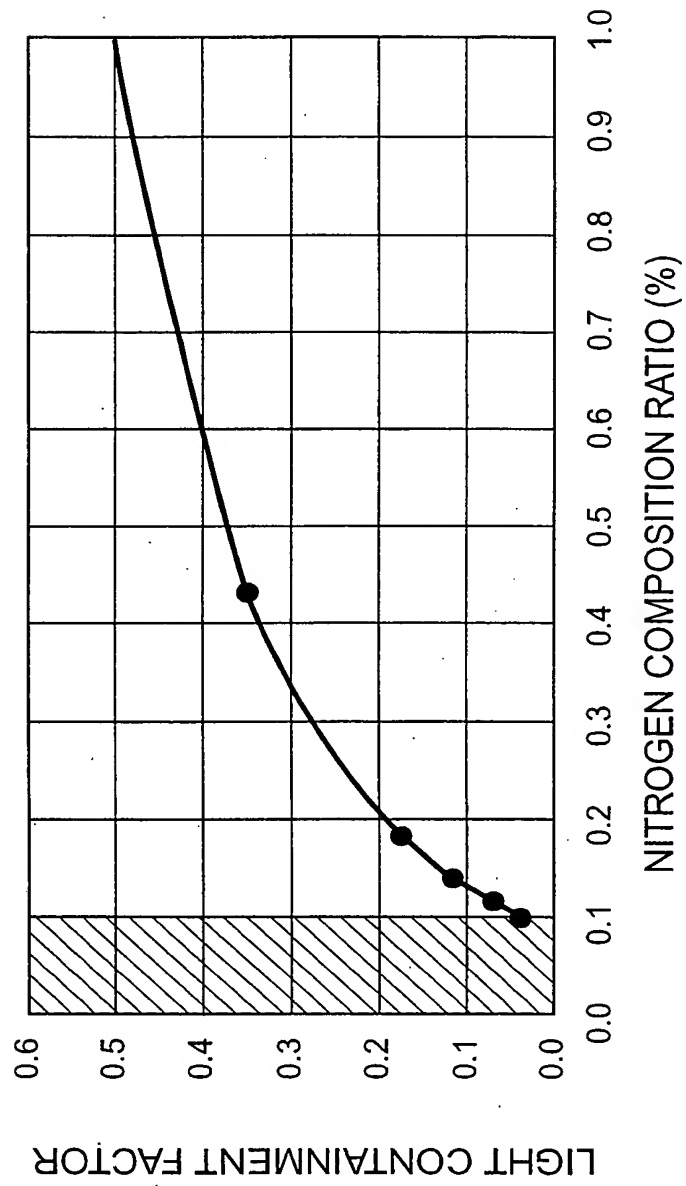
	LAYER COMPOSITION	THICKNESS(nm)	CARRIER DENSITY (cm <sup>-3</sup> )
INJECTION LAYERS	GaAs	2.1	UNDOPE
	AlGaAs	2.5	UNDOPE
	GaAs	2.3	$1.6 \times 10^{17}$
	AlGaAs	2.5	$1.6 \times 10^{17}$
	GaAs	2.3	$1.6 \times 10^{17}$
	AlGaAs	2.3	$1.6 \times 10^{17}$
	GaAs	2.8	UNDOPE
	AlGaAs	2.0	UNDOPE
	GaAs	3.2	UNDOPE
QUANTUM WELL LIGHT EMITTING LAYERS	AlGaAs	3.4	UNDOPE
	GaAs	4.0	UNDOPE
	AlGaAs	1.7	UNDOPE
	GaAs	4.9	UNDOPE
	AlGaAs	2.0	UNDOPE
	GaAs	1.5	UNDOPE
	AlGaAs	5.8	UNDOPE

PRIOR ART

Fig.13

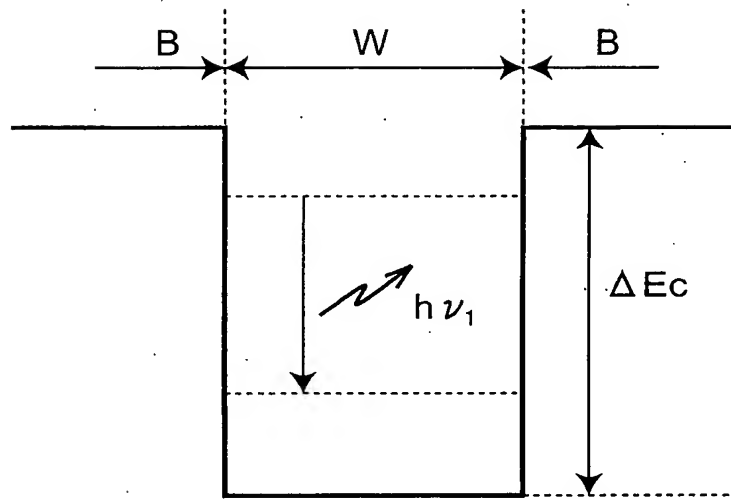


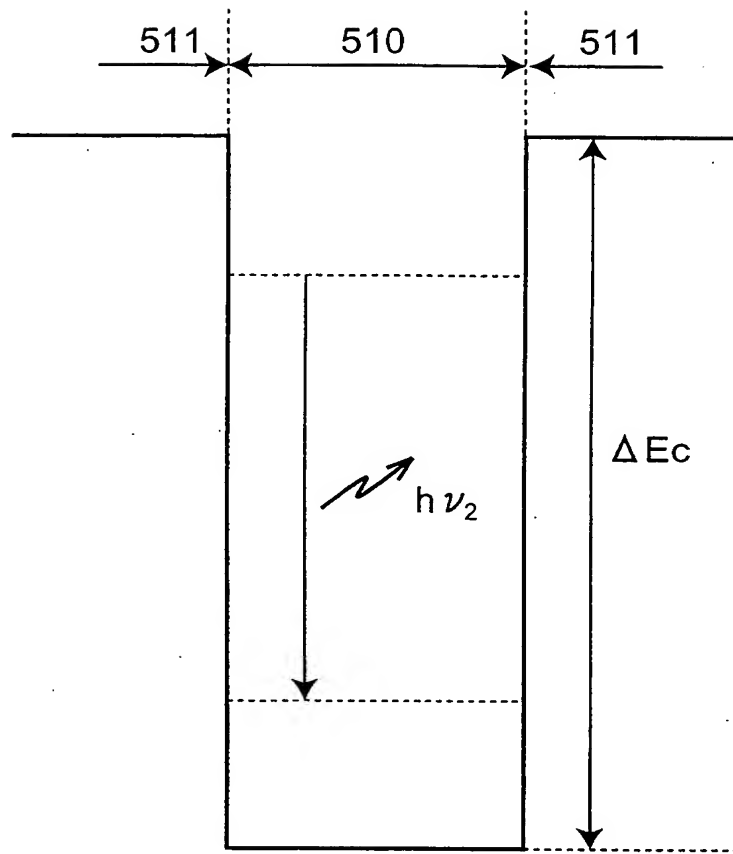
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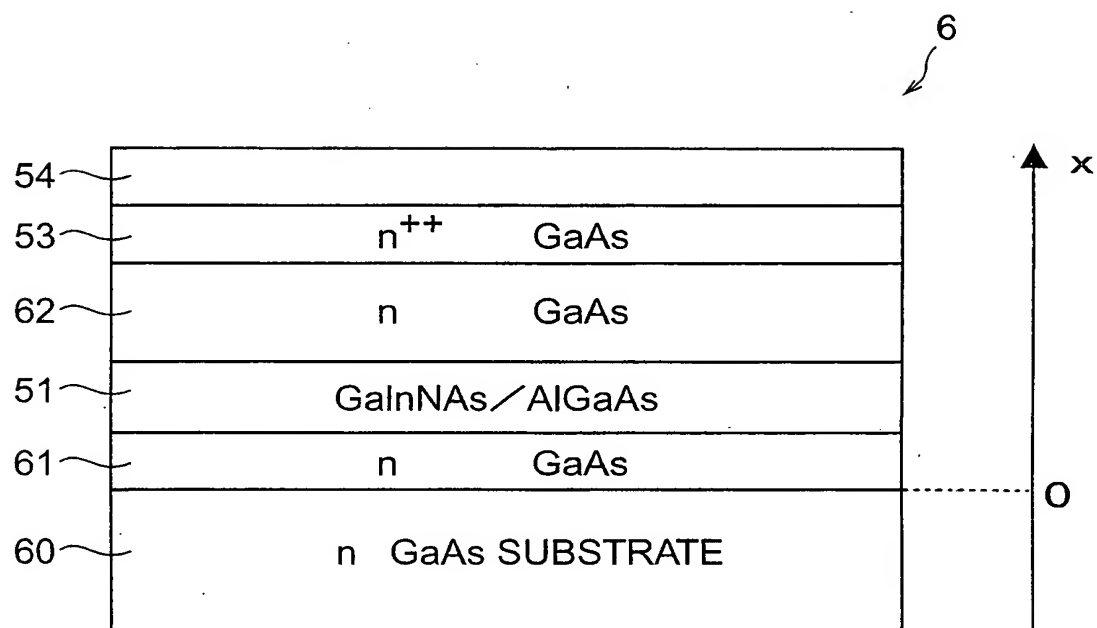
**Fig.14**

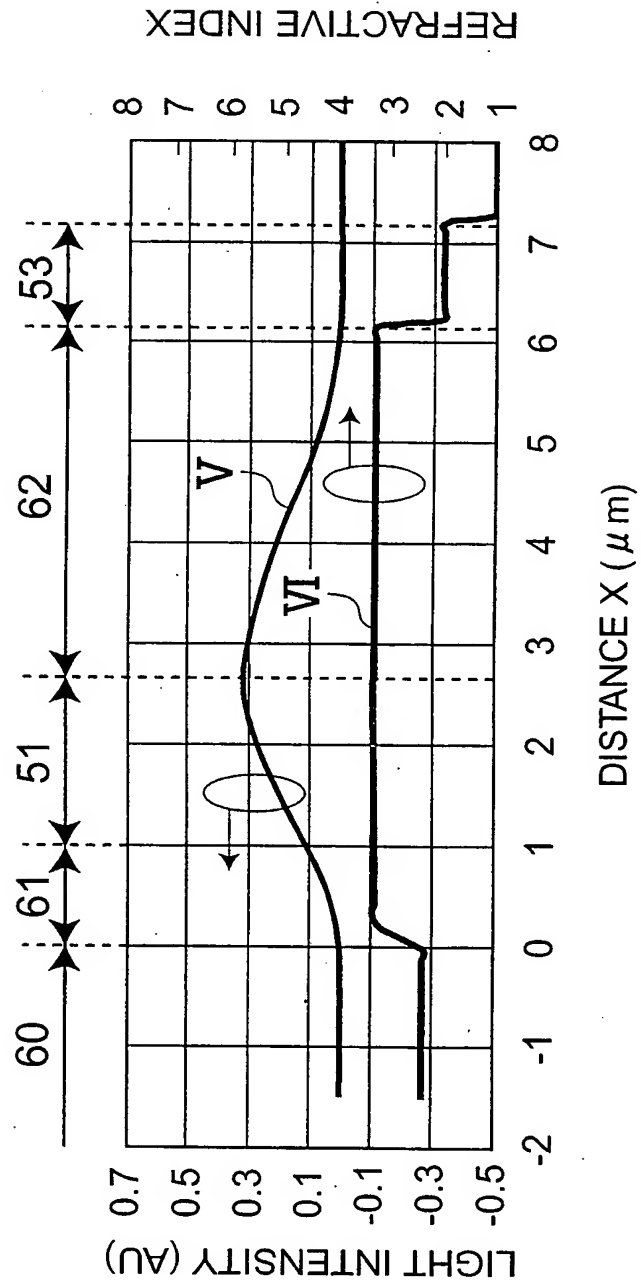
**Fig.15**

PRIOR ART

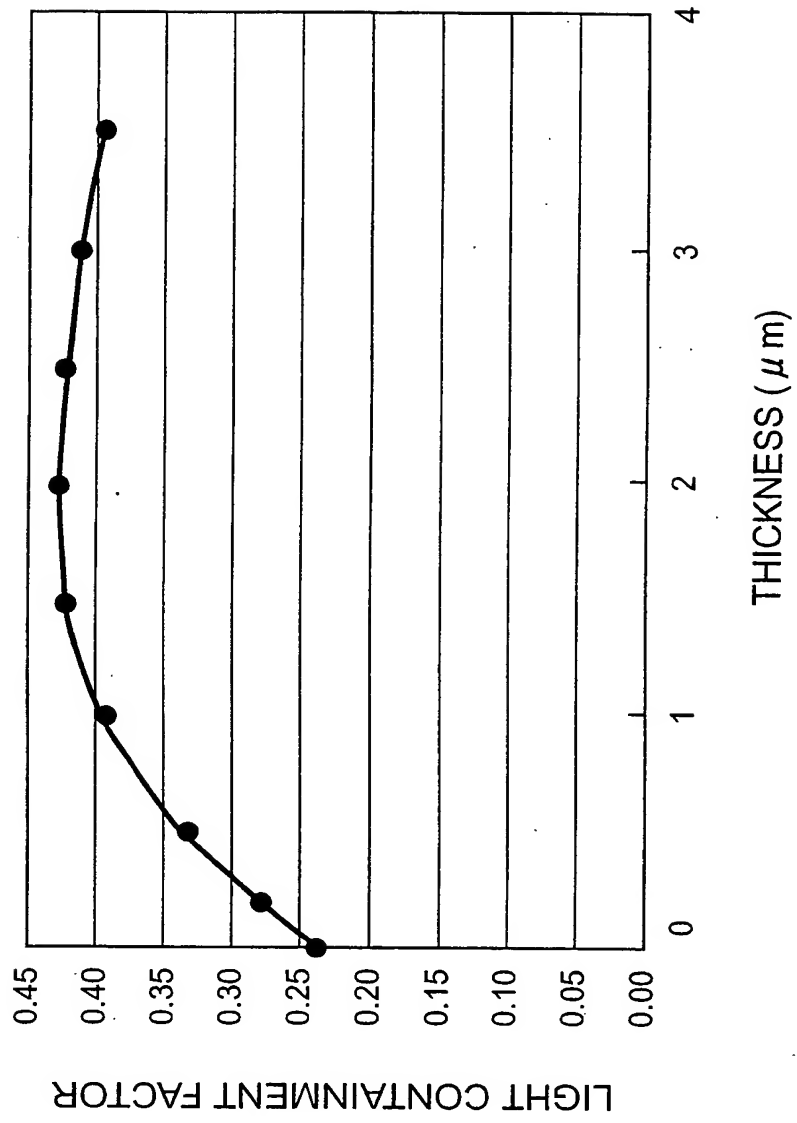


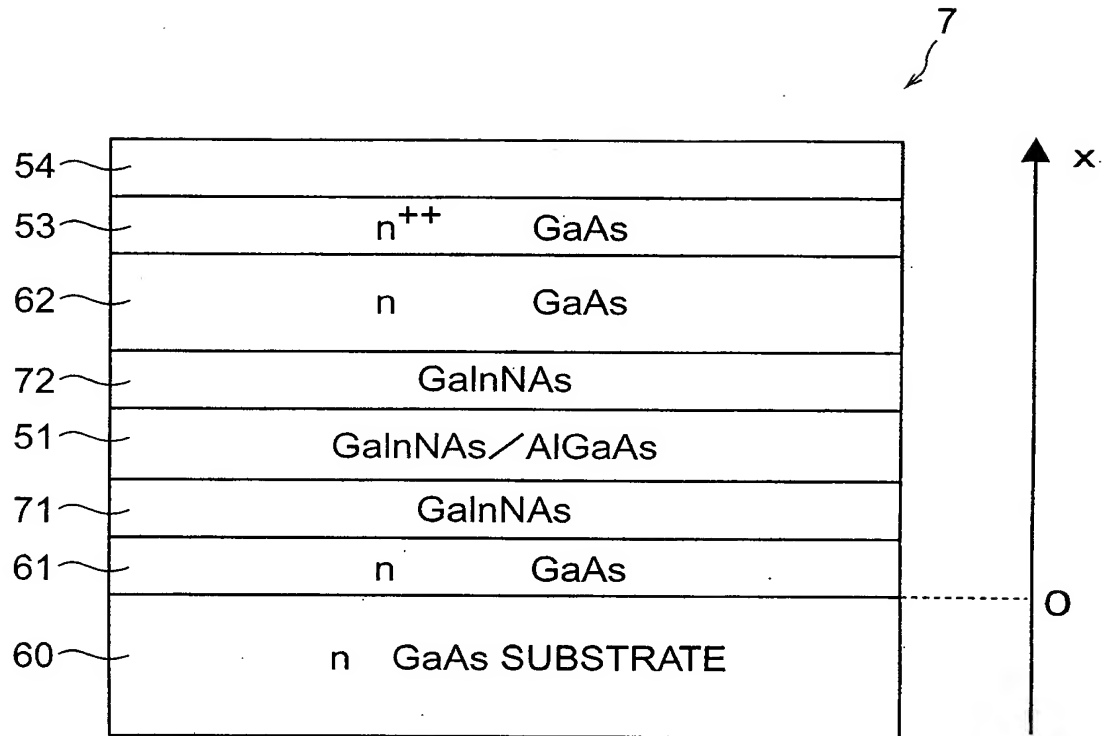
**Fig.16**

**Fig.17**

**Fig.18**



**Fig.19**

**Fig.20**

**Fig.21**